

Milan, Nov. 19, 1956

My dear Joshua, It has been my turn now to answer you, and I have not been better than you as a correspondent. I do not think I have even written you how much I enjoyed your latest discovery (is it still the latest? I refer to the penicillin balloons). We repeated them ^{experiments} here, of course, and liked them very much. From my side I have nothing new to report. I have had, and still have a great deal of routine to cope with, and the amount of my ~~work~~ research is gradually declining while that of commitments increases. I shall need a break from all this soon, and starting in a new atmosphere would help considerably; the address of the heading might be a solution, ^{for the future} but the slow pace at which everything proceeds in Europe will certainly demand a longer time before I can obtain the independence necessary for work, in Parma or elsewhere.

Fortunately, I shall have some time for writing, and ~~xxxxxxx~~ I have rebuilt the enthusiasm necessary for it. I would strongly recommend that we go on with the book. As your letter mentioned, I must give ~~some~~ ^{some} signs of it, and I would have liked to wait until I could send you something ~~xxxxxxx~~ substantial proof. I am just out of the last commitments, various duties in teaching statistics that I could not avoid. My only immediate commitment is the paper on Bacterial Genetics for Ann. Rev. Micr., which is not ^{only not} ~~incompatible~~, but rather synergistic with the book. In fact, what stopped me most so far was the fact that the chapter to be written next was chapter II, which demanded a good knowledge of a literature which I followed ~~carelessly~~ in the last years, and for both chapter II and VI, I felt that a radical reexamination of the literature was necessary and this idea almost overwhelmed me. The ARW commitment will now force me to the task, and I hope to be able to produce chapters 2, 5, 6 in a reasonable time; let us say, a chapter a month?

I was rather shocked when I read again my outline for chapter II. It is a very poor thing. On the contrary, I am fairly pleased on rereading what is ready of chapter V, essentially a ^{study} ~~study~~ of population kinetics. The scheme is quite similar to that laid down in the chapter outline, but quite different, and it seems to me, better than our joint Rome paper.

If therefore, you think you need ^{having} ~~xxxxxxx~~ chapter II in full before you can go on with III and IV, you should wait a little longer. Otherwise you can start on the last two, and I will not let you down. Perhaps the publishers who are always used to long waits, will be content to know that we shall be able to deliver ~~them~~ a completed manuscript after your planned visit here in September, [which would certainly help to put a number of things straight]; or would they insist ~~for~~ ^{on} having it before that date?

I do not think I have yet reacted to your proposal to pay a visit to us in September. It is a splendid idea and it has greatly pleased the both of us, even if my long silence after your letter may have seemed to point out just to the contrary. September ^{will be} ~~is~~ a favorable time (Krushchov permitting); the children will be on the seaside, so that we can easily accommodate you at home. The weather should be satisfactory. You might probably like to give a lecture in Milan and one in Rome; we were arranging ~~them~~ when we thought you might come in March, and they are easily postponed. The main advantage of the

from the tourist's point of view of lecturing in Rome is that in addition to ~~xxxxxxxxxxxxxxxx~~ being more pleasant it should be more remunerative. Money is made in Milan and spent in Rome. However, ^{still} we have been unable to have a precise answer; Rome being further South than Milan, everything is slower there, but there should be no difficulty.

Would there be a chance of ^{here} having you both in March and ⁱⁿ September? Have you worked out a definite schedule for both trips?

~~xxxx~~ The only thing written in my lab in the last months is a longish note, in Italian, on linkage analysis of F^+ , $Hfr \times F^-$ crosses. It should have given a definite proof of incomplete pairing, but it has not. There is a leak, ^{through} ~~from~~ which Jacob and Wollmann's hypotheses, somewhat complicated ad hoc, can enter. I am sending you separately ~~proofs~~ a copy of the proofs, just in case you like to exercise your own skill on the paper: the language in which it is written representing the most interesting side of it, in view of your ^{tourist} prospects.

Maccacaro will be working close to my lab, in the Microbiology Department of the University, starting with this academic year. He is the only person with whom I can exchange ideas on my problems, so it will be pleasant to have him close. Calef is spending a year with Luria, as you probably know. At the moment I have nobody working with me, at least on fundamental problems, and I find solitude depressing. My own plans are to analyse Hfr -linkages with some detail, as well as some selected short regions, unless I come across something more exciting. I will probably keep trespassing into human genetics for occasional diversion.

I was sorry that you did not join in the paper on mathematics of transduction. I am afraid there might be loopholes in the mathematics, and a thorough checking would have been useful; moreover, I was in want of a bright idea, to explain why there is about one crossover per break, and I hoped you would offer one. Also, I consider it very difficult to distinguish fixed from random breaks. I shall probably rewrite the paper, in any case; your suggestions will be welcome. *Of course it would be nice to have the two articles.* Our fourth boy is expected some time at the beginning of December. Alba has reached a considerable size, that made us actually fear a multiple birth, but perhaps we had just forgotten what sizes are normal in pregnancy. However no X-ray has been taken, and we shall not know for some other time. All the best to you and Esther. It is good that you have made up your mind to cross the Atlantic next year.

Yours

Luca

yours and mine, published in the same issue of Amer. Nat.